



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/orgdyn



Managing VUCA: The human dynamics of agility

Benjamin E. Baran, Haley M. Woznyj

Almost three decades ago, social scientists at the U.S. Army War College coined the acronym “VUCA” in an attempt to characterize the environment in which their students would need to operate in the future. VUCA—standing for volatility, uncertainty, complexity, and ambiguity—has since become a bit of a generalized term used across both geopolitical and business contexts to describe turbulence. And in the past decade or so, authors from both industry and academia have produced an increasing number of articles, books, blog posts, and YouTube videos discussing VUCA and its implications for leaders and organizations.

Alongside these discussions of VUCA are various ideas about how executives should guide their organizations in dealing with turbulence and attempts to characterize how employees of all levels can best deal with increasingly frequent change or uncertainty. A prevailing idea that has emerged is that agility—at the person, team, and organizational levels—is necessary for effective management of VUCA. At the level of the individual person, agility involves what Elaine Pulakos and her colleagues introduced some 20 years ago as “adaptive performance,” which includes competencies such as handling emergencies or crises, learning new tools or technologies, coping effectively with stress, among others. For teams and groups, agility often involves a combination of rapidly making sense of new situations along with the norms that support robust interaction and dissent to elevate decision-making quality. For organizations, agility involves ongoing sensing and monitoring of the environment and of the organization’s stakeholders to detect and respond rapidly to weak signals of threats or opportunities.

Yet despite the modest proliferation of ideas on these topics, executives and other leaders have few evidence-based resources to draw from with regard to using agility to deal with the VUCA they face. If it is true that many organizations are operating in a realm of increased VUCA—which seems to be the case—then it is helpful to

know what constitutes that VUCA and, perhaps even more importantly, how executives can deal with it. In other words, it is important to explore what management practices leaders find to be useful ways to build the agility of their organizations in face of VUCA. In this article, we aim to provide such a resource.

Namely, we provide three sets of interrelated actions that executives and key decision-makers can use to guide their organizations through turbulence: identify your VUCA, define obstacles to agility, and implement agility-enhancing practices. These three sets of actions, we argue, are central to the ongoing success of any team or organization amid turbulence (see Fig. 1). In the sections that follow, we unpack each of those areas. Specifically, we report synthesized findings from a study of diverse group of 1152 leaders and provide tools for leaders who seek to manage the VUCA in their environments through building agility around them through others. We also integrate our own findings with relevant research in management and organizational behavior to provide practices based upon evidence and science. Although we discuss each of these three sets of actions in a sequential fashion, we are not necessarily suggesting a specific order in which these activities should occur. Rather, all three sets of actions should occur in parallel, with frequent interplay among them to promote the rapid sense-making that is characteristic of agility itself. In so doing, we attempt in this article overall to provide an evidence-based way for leaders to manage VUCA, with an explicit focus on the human dynamics of such an endeavor.

IDENTIFY YOUR VUCA

The famed military strategist Carl von Clausewitz once wrote, “. . . geography and the character of the ground bear a close and ever-present relation to warfare.” The

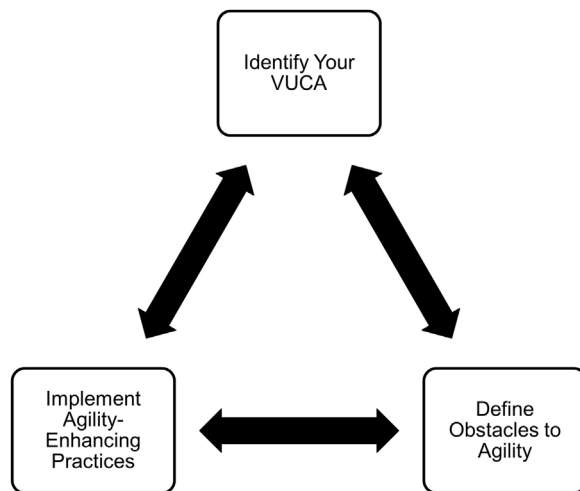


Figure 1 Managing VUCA through three interrelated sets of actions. VUCA = volatility, uncertainty, complexity, ambiguity

VUCA faced by any leader constitutes elements of his or her “geography,” and those who ignore those elements risk obsolescence. Managing VUCA requires leaders at all levels in an organization to sense what is going on internally and externally, early and often. Identifying the VUCA present in one’s environment is important because doing so gives leaders a shared sense of what threats and opportunities they face, which should then give rise to appropriate actions they should take.

Common Disruptive Trends

One way to think about your VUCA includes considering what other leaders are facing. To further explore the types of disruptive trends that business leaders face as part of the VUCA landscape, we asked the 1000-plus business leaders in our survey to rate the degree to which 35 trends—which we determined based upon a review of the popular press and scholarly literatures plus interviews with experienced management consultants—will affect their organization in the next three years. These trends, which contribute to VUCA, were grouped into five categories: (1) technological advances and innovations, (2) economic and financial issues,

(3) environmental and societal concerns, (4) geopolitics, regulations, and security issues, and (5) workforce dynamics.

The data collection occurred between June 2015 and June 2018 and occurred in collaboration with a management consulting firm, which disseminated the survey through its client network. The respondents represented more than 280 different organizations across a wide range of business functions and industries, with largest representations from manufacturing (23.44%), professional, scientific, and technical services (23.44%); and health care and social assistance (15.36%). Many (49.39%) represented organizations with up to 1000 employees, while others represented larger organizations (24.05%) and smaller organizations (26.56%). In addition, these leaders represented organizations from diverse locations; 47.66% of the leaders were from organizations with headquarters in the United States. Our sample was relatively senior, with 266 at the general manager/vice president level or senior (23.09%), 481 directors or managers (41.75%), and 229 team leaders or individual contributors (19.88%). Tenure in the organization ranged from 2 years or fewer (21.27%) to 2–10 years (40.97%) to 11 or more years (22.31%).

Of the 35 disruptive trends, the three trends rated as most disruptive were tools for helping people collaborate across dispersed locations, economic cycles/recession, and the influence of government on business. The three trends rated as the least disruptive were wearable technology, the sharing economy, and potential alternative currencies. It is interesting to note that these top trends remain highly applicable today, despite the economic and social upheaval precipitated by the novel coronavirus that began in late 2019 and took hold in the United States in 2020 (well after our data collection concluded). Fig. 2 lists the top 10 disruptive trends as rated by leaders in our study.

Our study encompassed a wider range of topics (including five categories of trends instead of focusing upon one, for example, technology) than many other studies or reports. Despite this different focus, our workforce trends align with many of those highlighted in annual lists published by the Society for Industrial and Organizational Psychology. Additionally, the 2020 CEO Challenge survey conducted by The Conference Board lists the following among its top 10 concerns for CEOs: recession risk, uncertainty about global trade, more intense competition, global political instability, tight labor market, more demanding customers, cybersecu-

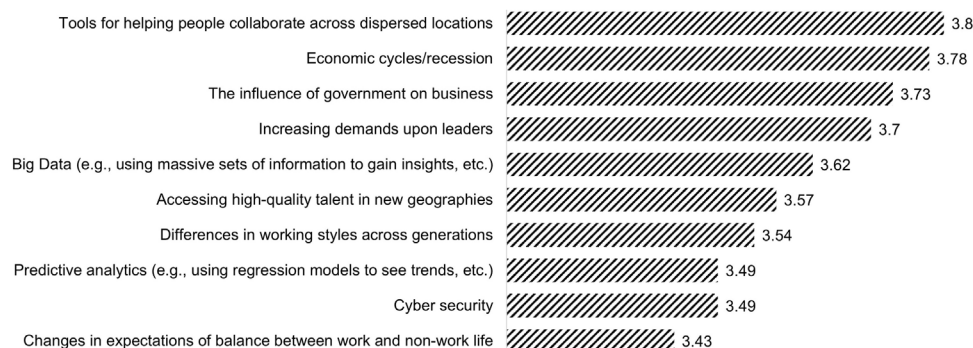


Figure 2 The top 10 disruptive trends as rated by business leaders. Numbers displayed are the averages of ratings from 1 (*not at all*) to 5 (*to a very great degree*) regarding the degree to which respondents thought each trend will affect their organization during the next three years

ity, less trust in political/policy institutions, impact of climate change on business, and tougher regulatory environment. These findings provide corroboration of many of the top 10 disruptive trends as rated by respondents in our survey.

Sensing, Assessing, and Monitoring VUCA

While readers may empathize with the top trends we described above, what is even more important is that executives and other organizational leaders continually sense, assess, and monitor the VUCA in their environments. Namely, effective leadership requires the recognition of and navigation amid a specific context. For example, leading a group of nuclear engineers who are conducting their routine daily work is much different from leading a group of entry-level analysts who are attempting to work together for the first time on a project. In the former, the leader's job is primarily to remove obstacles to high performance and build a supportive environment. In the latter, the leader's job centers upon providing clarity, direction, and ongoing feedback due to the novelty of the situation and inexperience of the participants.

Similarly, the context within which an organization operates should drive its strategy. Leadership at the strategic level necessarily involves a consideration of the external environment, which includes but is not limited to one's industry, competitors, customers, and government regulations. Therefore, the types of VUCA, or turbulence, that leaders face should be a factor when executives think about and develop organizational strategies. Without such context, leadership becomes a one-sized-fits-all activity that may only be effective by coincidence.

We suggest that leaders "turn up the volume" on the sensing, assessing, and monitoring activities in their teams to identify the disruptive trends in their environments. To help leaders in this endeavor, we developed "The VUCA Audit" displayed in Table 1 to better identify the VUCA they face. Leaders could consider using the audit in several ways. First, they could use the questions posed in the audit as a means for self-reflection, answering the items for themselves. For any items that leaders find difficult to answer, they could develop action plans to address those gaps. Second, leaders could use the audit as a way to guide discussion within their teams. For example, a leader could provide the audit to his or her team well in advance of a team meeting or short retreat. Then, as a team, the members could discuss each of the items and use the learning that results as a way to make sense of the VUCA they face and how they can deal with it both individually and together. Third, leaders could adapt some items for use in periodic surveys (either organization-wide or targeted as appropriate) or focus groups to gather insights from across the organization. Specifically, the following open-ended items could yield insightful data:

- What are the most important trends in our industry?
- What are the most important trends within our organization or workforce?
- What regulations or laws influence what we do and how likely are they to change?

Table 1 The VUCA audit

Ask yourself, others, or your team/organization:

To get a sense of anticipated volatility, uncertainty, complexity, and ambiguity overall . . .

1. What might change quickly about the organization or industry? What is "trending"?
2. What aspects of the organization or industry are unpredictable?
3. How is our work interconnected with or dependent upon other stakeholders?
4. What about our organization or industry lacks clarity or has multiple implications?

To get a sense of one's own sensing and monitoring behaviors . . .

1. How might I stay in touch with trends in my organization, industry, or function?
2. How often am I surprised by decisions or events, and why?
3. What resources or relationships do I have or need to keep abreast of ongoing changes?
4. How much time do I spend listening to others, inside and outside of my organization?

To get a sense of trends inside the organization . . .

1. What do people talk about the most in meetings?
. What are the most common topics "in the grapevine" among coworkers?
3. What are the key focal areas of our strategy documents and policies?
4. What do key leaders—both formal and informal—talk about the most?

To get a sense of trends outside the organization . . .

1. What regulations or laws influence what we do and how likely are they to change?
2. What aspects of our clients or customers are changing with regard to what we do?
3. What are our competitors doing that we are not doing, and why?
4. What aspects of the industry could fundamentally influence our success?

- What aspects of our clients or customers are changing with regard to what we do?
- What are our competitors doing that we are not doing, and why?
- What aspects of the industry could fundamentally influence our success?

In addition to helping leaders anticipate potential changes, these activities also may help with creating the conditions for rapid adaptation. Research on organizations that deal with risky technologies—for example, nuclear power plants, the fire service, and the military, to name a few—suggests that achieving a high level of reliability is less about being error free than it is about noticing the weak signals of errors or change quickly. Conducting The VUCA Audit may help leaders become aware of such weak signals early, when enough time may still exist to respond.

DEFINE OBSTACLES TO AGILITY

Alongside identifying the VUCA within and outside one's organization, leaders should continually evaluate key obstacles to agility, which research increasingly proposes as a way to deal with turbulence. In addition to asking about VUCA and disruptive trends in our survey, therefore, we asked respondents to discuss, "What is the biggest OBSTACLE keeping your organization from becoming more agile?" Given the quantity of responses, we used a computer-aided process to help sort the responses into themes.

Our respondents described six obstacles that might prevent them from dealing effectively with the forces of change in their environments. We describe these obstacles along with potential ways to deal with them below.

Inertia of the Status Quo

This obstacle involves allowing the persistence of and commitment to current practices simply because they are familiar and resisting that which is new. This resistance, according to our data, gets in the way of the disruption that organizations may need to occur for new, more agile practices to take hold. Inertia or operating "because we've always done it that way" is not in and of itself surprising. Humans generally like routines because routines can reduce the amount of cognitive effort one needs to expend while going through a set of tasks. Yet our data and additional research in the organizational sciences suggest that in a VUCA context—an environment characterized by turbulence and change—inertia is likely to occur because of several additional potential reasons.

First, if a VUCA context is particularly threatening to the way an organization is functioning or to the way a person does his or her job, clinging to the status quo provides immediate comfort. It allows people to discount the potential magnitude of the change they face, and it shields them from the vulnerability required to admit the necessity for change. Second, people may particularly like the status quo in the face of VUCA because leaders have failed to facilitate the sensemaking that is required for everyone to understand why change is imperative and why the chosen course of action is the best one for them and the organization. Third, adherence to the status quo in a VUCA context may stem from leaders not providing the resources or direction necessary to help people change; furthermore, leaders may have not provided enough evidence of the probability of success to bolster people's sense that change is possible.

One example of dealing with the inertia of the status quo comes from T-Mobile, which, under the leadership of a new CEO recognized the need for internal disruption. Namely, in order to turn the company into one that embraced a customer-centric posture, leaders realized that the employees needed to embrace change first. Specifically, according to a case study from the Institute for Corporate Productivity (i4cp), T-Mobile leaders used customer feedback to create an overarching manifesto for company operations. That guiding set of ideas, coupled with changes to policies and procedures designed to enhance customer interactions and satisfaction, helped the company break free from the inertia of how it had been operating.

Time and Organizational Design Barriers

In our data, this category of obstacles to agility refers to structural or policy issues in the organization such as barriers or "silos" among departments that create uncertainty or strain time and resources. Silos prevent cross-team and cross-departmental knowledge sharing, which creates a breakdown in communication. Furthermore, in such situations it is difficult to create alignment while formulating or executing strategies and goals. This obstacle, similar to clinging to the status quo, is common in many organizations. Yet these types of barriers are particularly apparent and challenging in a VUCA context because those situations are precisely ones that need robust collaboration and sensemaking. Trying to figure out "what's going on" amid VUCA is a team sport. As the organizational theorist Karl Weick has written extensively, gaining a shared sense of a situation requires "heedful interaction." Plainly speaking, without robust communication and teamwork that bring together diverse perspectives, teams and organizations will fail to respond adequately to VUCA.

One creative example of breaking down structural barriers between departments, also documented in the i4cp report mentioned above, comes from Igloo Products Corp., a U.S.-based manufacturer of cooler products. When he was CEO, Mark Parrish would lead his executive teams in conversations in which they would imagine creating a company that would put Igloo out of business. These conversations led to ideas and practices that created fertile ground for cross-functional work.

Unresponsiveness to Customer Needs

This category captures the difficulty in managing the uncertainty regarding what products or services the organization should be providing to meet customer needs and the manner in which it should be providing them. Perhaps one of the most frequently cited examples of unresponsiveness to customer needs and changing trends is Blockbuster, which rented movies in its thousands of retail locations throughout the 1990s and early 2000s. Customers, however, began to prefer the experience of using video providers Redbox and Netflix, leading to the company filing for bankruptcy protection in 2010. As of the writing of this article, only one Blockbuster video store remains in the entire world.

Growing Pains

Growing pains refers to the difficulties that organizations experience as they develop from small firms to larger ones or as they mature their functions and how deliver their products or services. For example, respondents to our survey described the obstacles associated with effectively evolving an organization's culture as well as its resources and capacity as it grows. In addition, focusing on growing the organization takes time, money, and resources, which may create the perception that agility is "something we will do later." This obstacle points to the importance of mindset and organizational culture in creating an agile organization. A report from the management consultancy McKinsey & Co. titled, "The Journey to an Agile Organization," highlights

this perspective. The report cites the global healthcare company Roche, which included in its agile transformation a four-day intensive leadership program focused on both individual and organizational transformation. Over time, more than 4000 leaders went through the program, which contributed to the company's efforts in changing how people talked about and thought about agility.

Slow Communication and Bureaucracy

Respondents mentioned how slow communication and bureaucracy can hinder organizational agility. This is not surprising, given that in many cases a central component of agility is speed. When formal rules and guidelines are in place that hinder communication and prevent quick decision-making, agility becomes difficult. In our own experience with multiple companies, we have found that leaders often express a desire for agility, yet they want to focus on one part of the organization (e.g., product development, engineering, etc.). This approach is not altogether wrongheaded. The problem occurs, however, when that one part of the organization starts moving faster, falls in love with new processes and communication flows, but then runs into stringent rules elsewhere in the organization or a lack of required information. If the top leaders do not address communication and bureaucracy issues for the entire organization, the "more agile" part of the organization oftentimes gets frustrated and may cease to perform optimally.

Outdated Processes

Outdated processes that do not align with the environment or current trends in the market can inhibit agility. This could occur simply because people in the organization may not know about better and faster ways to work. In addition, the environment is evolving so quickly that it is difficult to keep up. Alternatively, as the first obstacle suggests, change, particularly away from the status quo, is challenging. Thus, some may find it more comfortable continuing with practices that can quickly become outdated. Not to overuse the Blockbuster punching bag, but the video-rental company simply did not keep up with new processes for delivering video content to customers, be it via a kiosk or through web streaming services, which ultimately led to the company's demise.

IMPLEMENT AGILITY-ENHANCING PRACTICES

One proposed way to deal with VUCA is through building agility, which again is the capability of a person, team, or organization to sense and respond rapidly to change. To unpack this side of the equation, we went back to the same survey and analyzed respondents' answers to two open-ended questions: (1) "What is the most important practice that your organization is CURRENTLY doing that is helping you become more agile?", and (2) "What is the most important practice that your organization SHOULD DO in the future to help you become more agile?" Like our analysis of common obstacles to agility, we used a computer-aided method to sort responses. Our analysis resulted in the seven categories that we describe below.

Communication and Transparency

One of the most prevalent recurring themes in our data was the importance of ongoing, effective communication and transparency about both internal operations and relevant external factors. In addition, our respondents pointed to maintaining bottom-up lines of communication in facilitating organizational agility. This is particularly important because organizations often struggle with bottom-up communication; employees do not feel comfortable relaying information to their leaders or those higher up in the organization. Yet, frontline employees can provide unique information that can be helpful in sensing VUCA. Middle managers, as a result, play a critical role in helping the organization make sense of emerging events and situations, highlighting the importance of such multi-level communication.

The U.S. military has two common sets of practices that highlight the use of communication and transparency to drive agility. First, leaders of large operations create and publish what is known as the "commander's intent." This document describes the overall situation and the desired outcomes, and it serves as a way to promote widespread understanding and enable subordinate leaders and teams to adjust their actions, if necessary, to accomplish the mission. Second, leaders often seek and require ongoing input from those who are closest to "the fight"—be they infantry platoons, aircraft pilots, ship operators, or any others who are executing missions—regarding what they are experiencing and lessons learned. These bottom-up reports then fuel appropriate changes in tactics or operations, which are important to the ability to be agile and to respond effectively to VUCA.

Knowledge Sharing and Teamwork

Related to communication, this category of practices to promote agility refers particularly to the sharing of information across people, teams, and departments for the purpose of knowledge generation and education. Our survey respondents focused in particular on the use of teams and high-quality meetings to achieve this end. Teams provide the opportunity for organizations members to interact and share information to help make decisions. Sharing knowledge and teamwork in general is important to promote agility for a few reasons. For instance, sharing knowledge can help to identify VUCA trends internal and external to the organization. Further, sharing such information and talking through it as a team can help to make sense of such trends and the implications for the organization. As a final example, teams can also brainstorm unique and innovative ways to respond to such trends. Drawing from the literature on team effectiveness, the most successful teams have members that share positive norms for behavior, such as communication, and a common purpose and understanding of how to achieve goals.

Two good examples of using knowledge sharing and teamwork to drive agility come from the global, Sweden-based technology company Ericsson and the streaming audio platform Spotify. At Ericsson, more than 100 small teams are now devoted to addressing customer needs, using agile principles

to deliver solutions in three-week cycles. Relevant research from the organizational sciences suggests that these tactics work because the teams are small (teams that are too big suffer from people not doing their share of the work, and it takes more time to coordinate work across many people) and because the work has a specific cadence. Using a three-week period to drive meaningful progress draws upon the basics of goal-setting theory; namely, that having difficult, specific goals can increase motivation.

At Spotify, which both popular case studies and some emerging management research have cited for its agility and agile practices, employees share knowledge across organizational boundaries through what insiders call “guilds.” These groups are communities of practice, which allow people to learn from each other about both technical matters (e.g., software coding techniques) and broader organizational matters. Two types of guilds exist at Spotify: organic and structured. Regardless of type, both serve as a way to open the flow and creation of knowledge within the organization.

Fostering Agile Behavior

Many respondents also discussed the value of using training and development to foster agile behavior intentionally. Specifically, our data suggest the importance of using training to develop both skills and knowledge among employees and leaders that can promote or enable change, and as a result, organizational agility. For example, one such behavior that respondents suggested would promote agility is fast communication and decision-making. The ability to communicate and make decisions quickly is important to respond to and adapting to rapidly changing environments. Slow communication and decision making inhibit agility and adaptation because as senior leaders are deliberating how to respond to one change in the environment, other changes are likely occurring. In addition, communication is key in times of change.

Ericsson provides a good example within this set of practices as well, with a focus on the agile transformation of its research and development processes. Fostering agile behavior during this transformation occurred in phases, beginning with corporate strategy and then proceeding through the creation of cross-functional teams, holding workshops to promote collaboration and knowledge sharing across those teams, and then taking additional steps to drive integration and continuous delivery of solutions. Like Ericsson, other organizations seeking to become more agile need to recognize that it takes time, deliberate effort, training, and structural changes to help teams work in an agile way.

Iterative Improvement and Learning

Respondents also mentioned that organizations should engage in systematic, continual development. This category captures activities in which organizations seek continual improvement in areas such as making decisions, learning, and communicating. This agile orientation views change as an ongoing process, not as an event on the path toward equilibrium. It builds on the aforementioned categories in that continuous, evolutionary change requires consistent

learning, open communication and knowledge sharing, and the skills, mindset, and knowledge necessary for change. Continuous development is advantageous because it allows organizations to address immediate issues daily, which likely builds dynamic capabilities and readiness for more radical changes in the future. This is important in order for organizations to deal with the volatility of the business environment and make it a little more manageable.

Microsoft provides a good example of integrating users into ongoing improvement efforts. Recovering from its release of Windows Vista in 2007 and previous releases that provided limited opportunities for user feedback, the company in 2014 shifted its tactics to create user groups. These user groups, which have more than 7 million members, allow for rapid feedback and delivery of product updates. Companies of all types are well-served by the notion of using feedback on an ongoing basis to learn as an organization and to iterate its products and services.

Deep Customer Focus

Another category that emerged from our participants' responses was planning and anticipating customer needs and changes in trends to promote organizational agility. In order to adapt and be agile, respondents suggested that organizations must attempt to predict trends and changes in the environment, including customers' needs. If organizations are able to predict these changes, they can develop strategic plans for the future to address those needs accordingly. That is, they can be ahead of the change.

Netflix is an example of using deep customer focus to drive agility. In contrast to Blockbuster, Netflix had a much better sense of what customers wanted and how to address their needs. Although it is now a major streaming service for video content, the company started by simply mailing DVDs to its subscribers. Over time, the company evolved alongside technological advancements to where it is today.

Deep customer focus can also include continually understanding the organization's internal customers. For example, human resources departments often maintain, modify, or create processes for employees. Doing so in an agile way involves treating employees as customers and involving them in creating or improving processes. For example, if a company wanted to improve its onboarding process, an agile approach would absolutely require spending time with and understanding the stories of new and recent hires to the company. Then, human resources leaders could develop basic ideas to improve the process and gain feedback on those ideas, again using new and recent hires for that feedback. The same approach, of course, could apply to other internal process improvement efforts.

Leadership and Role Modeling

This category refers to top management providing direction, motivation, and communication regarding business decisions, policies, and practices, as well as the need to be agile. Many of the practices described above are the result of strong leadership. This can take on a few different forms. For example, agile leaders create an organizational culture and capabilities based on agility, in which agile behaviors are the

norm and the importance of being agile is widely understood. In addition, agile leaders use the culture to set a vision that employees and teams embrace. Agile leaders also model agile behaviors themselves.

Executives at the companies included in the examples above—Netflix, Microsoft, Ericsson, Spotify, and many others—illustrate the effects that leadership and role modeling can have on agility. These leaders have intentionally developed and implemented policies and practices that promote agile behaviors, and which have helped to create a culture of agility. Oftentimes, including the case of John Legere at T-Mobile, leaders are hired purposefully to mix up the status quo and to help the company adapt to the changing environment.

Strategic Alignment and Managing Talent

Respondents recommended investing resources in talent management. That is, organizations should spend time and resources to hire quality applicants and offer developmental opportunities that will allow employees and the organization as a whole to be agile. Talent management is a key initiative to support other agile practices. For example, having a strong talent pool is an important first step in optimizing training and education outcomes.

Companies like Adobe and GE have also targeted their performance management systems to help them be more agile. Instead of the traditional annual performance appraisals, companies are opting for more informal and frequent performance appraisals. Traditional performance management systems doused managers in administrative paperwork and allowed managers to hold their employees accountable only for past behavior. Replacing that system with real-time, informal feedback allows managers to address behavioral issues more quickly, help employees adapt to changing

situations more quickly, and to better develop their employees' skills and behaviors for the future.

In sum, based upon these categories, responses within our data, and related research; we developed "A Leader's Checklist for Enhancing Agility," which we display below in Table 2. In addition to The VUCA Audit, leaders could use this tool as a reminder of key actions they can take to enhance agility within their team or organization.

LEADERSHIP STRATEGIES TO NAVIGATE VUCA

Above, we have presented (a) the common sources of VUCA that leaders in our sample face followed by (b) a series of obstacles to managing VUCA and (c) a series of practices for managing VUCA. For executives and managers in the midst of VUCA, however, it is helpful to think about these obstacles and recommended practices simultaneously. That is, when dealing with turbulence and disruption, executives are likely to face the obstacles we described. When they do, they should implement specific practices. Fig. 3 displays an integrative illustration of how the disruptive trends, obstacles to managing those trends, and recommended practices for overcoming those obstacles to manage VUCA fit together and inform each other.

Namely, the many disruptive trends present in the business environment present both challenges and opportunities for leaders and organizations to respond and change. When considering such changes, however, many obstacles exist that prevent leaders from responding effectively and efficiently. Leveraging the recommended practices that leaders identified in our survey, we map them on to the obstacles that our leaders also identified to provide actionable ways that leaders can manage and respond to the biggest disruptions in their environment. We expand upon these management strategies in the following section.

Table 2 A leader's checklist for enhancing agility

Category	Activities or sets of behavior to do with your team
Communication and transparency	<input type="checkbox"/> Provide frequent updates regarding strategy and implications <input type="checkbox"/> Listen actively to team members and follow up on their ideas <input type="checkbox"/> Discuss why and how decisions are made; make plans visible
Knowledge sharing and teamwork	<input type="checkbox"/> Hold frequent, focused meetings to align activities and information <input type="checkbox"/> Engage and encourage others' engagement in cross-functional work <input type="checkbox"/> Use tools (high- and/or low-tech) to facilitate team communication
Fostering agile behavior	<input type="checkbox"/> Learn and apply agile tools (e.g., Scrum, Kanban, etc.) as appropriate <input type="checkbox"/> Assess meeting cadence and adjust to meet workflow requirements <input type="checkbox"/> Continually groom the backlog of team tasks for proper prioritization
Iterative improvement and learning	<input type="checkbox"/> Allow team members to take reasonable risks, fail, and learn <input type="checkbox"/> Test new ideas when minimally viable, using feedback to improve <input type="checkbox"/> Facilitate frequent, candid, and safe discussions about team effectiveness
Deep customer focus	<input type="checkbox"/> Involve customers—both internal and external—in improvement efforts <input type="checkbox"/> Conduct and encourage frequent "voice of the customer" interviews <input type="checkbox"/> Investigate, assess, and follow-up on customer ideas and concerns
Leadership and role modeling	<input type="checkbox"/> Talk about the need for agility and support ideas for becoming more agile <input type="checkbox"/> Push decision-making authority to the lowest reasonable levels <input type="checkbox"/> Show agility through openness to new ideas and willingness to change
Strategic alignment and managing talent	<input type="checkbox"/> Update strategy and metrics frequently to align with customer needs <input type="checkbox"/> Assess and transform roles and relationships to support agile workflow <input type="checkbox"/> Carefully hire and develop high-quality employees who support agility

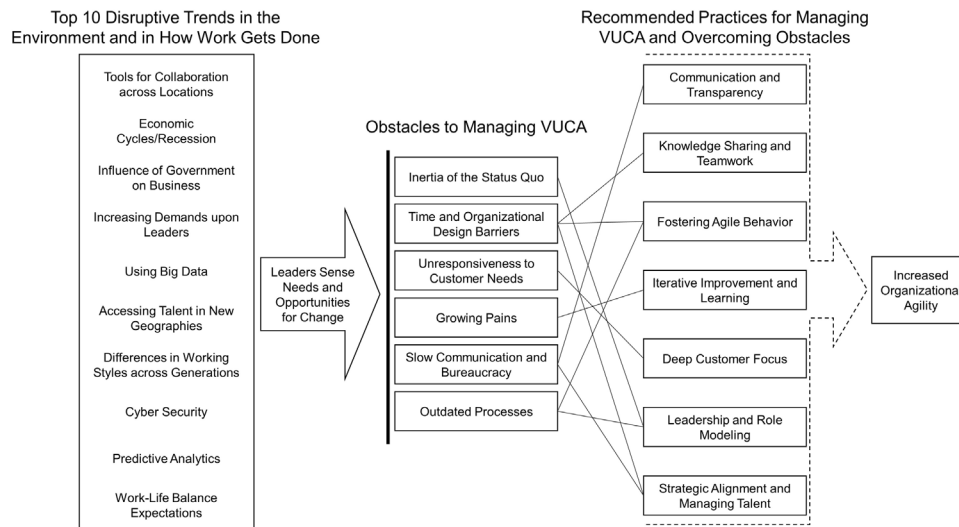


Figure 3 VUCA, Managerial Obstacles, and Recommended Practices. VUCA = volatility, uncertainty, complexity, ambiguity

Managing Inertia of the Status Quo

In large-scale organizational transformations, executives who “lead from the top” are critical. Therefore, the practice to promote organizational agility that most directly meets the challenge of inertia of the status quo is *leadership and role modeling*. That is, leaders can open lines of communication by developing a supportive environment in which people feel comfortable sharing their opinions and communicating honestly. In addition, leaders can help mentor and coach individuals and teams to develop growth mindsets and agile behaviors and to clarify team roles. Leaders must also provide resources necessary to be agile. Finally, as mentioned previously, leaders can create an overall atmosphere and culture that is conducive to agility continuous change via role modeling and the implementation of policies and practices that support and reward agile behavior. Without such support, people will quickly regress to prior habits. Strong leadership is important not only to support agility at the strategic level, but also to develop and support a workforce that is willing and able to continuously learn and change.

Managing Time and Organizational Design Barriers

First, *strategic alignment and managing talent* should involve leaders closely examining and address the structural issues of organizational design that might hinder agility. Organizations should hire employees with a strong openness to experience and willingness to learn. In addition, talent management is crucial in supporting agile practices regarding teamwork and knowledge sharing. Organizations must select team members who have the necessary and complementary technical skills and knowledge—combined with a willingness to work with others. Our participants also suggested that there should be alignment between all levels, functions, and systems in the organization. This is important to ensure that all appropriate systems are in place when responding and adapting. When an organization operates in

silos, it becomes increasingly difficult to make decisions quickly, which is crucial to being agile.

Second, included in *fostering agile behavior* are the sets of tools and resources that can allow for the better flow of information and collaborative activity necessary to break down unproductive organizational barriers. It is not only critical to keep lines of communication open, as described above, but to train employees on how to make decisions and communicate them in real time. Practically speaking, this may include considering aspects of Scrum, which is a set of practices for teams to organize their work and systematically review their progress and reflect upon how they can improve. Additionally, the Cynefin framework proposed by David Snowden and Mary Boone is a useful framework for leaders to analyze better what types of situations they face and craft an approach that fits that situation. In that framework, Snowden and Boone suggest that leaders should make sense of their environments by thinking about them as one of four types: simple, complicated, complex, and chaotic. In simple contexts, decision-making can follow best practices. Complicated contexts are the realm of emerging practice, in which leaders should sense, analyze, and then respond. Complex environments are more difficult to understand than complicated ones; as such, the appropriate response is to probe, sense, and respond. Chaos demands action first, from which people can then sense and respond. Other important skills and knowledge to train on to promote agile behaviors could be enhance readiness for change and to develop a sense of openness to new experiences or change.

Finally, *knowledge sharing and teamwork* includes practices for embedding teamwork across functions and using workplace meetings as a strategic advantage. For example, team members should have a clear understanding of how other team members approach problems and what unique types of knowledge or skill they each have. Many of our respondents mentioned that meetings were an important tool to encourage knowledge transfer and learning in teams. Meetings, when conducted well, are advantageous because they allow for real-time brainstorming, sensemaking, and knowledge sharing and building.

When teams and departments share knowledge, leaders are better able to analyze the entire business environment, rather than a singular portion of it. As a result, leaders and their organizations can make sense of the complex and ambiguous situations that they face and can develop capabilities to cope with changing conditions. Similar to open lines of communication, knowledge transfer and teamwork reduces ambiguity by providing clarity about the business environment. In addition, cross-team and cross-departmental knowledge sharing helps organizations to cope with complexity, as it can help organizations to “connect the dots” among various systems and processes.

Managing Unresponsiveness to Customer Needs

Clearly, *deep customer focus* is the set of practices that most directly overcomes this obstacle. Anticipating change and trends, particularly in customer needs, is important to help reduce uncertainty and create value for customers. A proactive customer orientation requires that organizations focus on changes in the customers’ environments. Some ways in which organizations can anticipate customer needs and trends include conducting situational analyses, employing data mining techniques, and using qualitative methods designed to provide market insights. Much of this can come about through robust efforts to engage with customers on an ongoing basis, studying their patterns and trends, and quickly disseminating those findings throughout the rest of the organization to promote informed adaptation.

Managing Growing Pains

The practices described in our data within the category of *iterative improvement and learning* may allow the organization to both grow and become more agile because change often presents the opportunity for trying new processes and ideas. Organizations can develop an agile orientation in a number of ways. For example, leaders and employees alike should develop what Carol Dweck and her colleagues have termed a “growth mindset,” whereby they believe that people can change and improve their performance over time. It is also important that leaders build a culture that is based on continuous improvement, flexibility and a growth mindset, signaling to employees that agile behaviors are the norm and are expected. Leadership behaviors are central to such a culture and includes approaches toward decision making, helping the organization overcome setbacks, and manage the tension between change and stability.

Managing Slow Communication and Bureaucracy

From the practices to promote organizational agility in our data, we see both *communication and transparency* and *strategic alignment and managing talent* as important solutions. It is important for leaders to be transparent about decisions, business updates, and market changes to help their organizations to respond and adapt quickly to changing conditions, which is a critical component of organizational

agility. Without the ongoing collection of new information, organizations cannot appropriately develop solutions that align with the changing conditions they need to address. Appropriate communication and transparency reduces uncertainty and ambiguity by providing leaders with information and clarity about the business environment that is useful for developing responses to changing conditions. Moreover, practices that enhance transparency inherently will increase the speed of communication, while aligning structures and processes with strategy speaks to the hindrance of bureaucracy.

Managing Outdated Processes

In dealing with processes that are simply outdated or are in use simply due to habit, the practices described in *fostering agile behavior* should be helpful. Outdated processes may also persist as a function of the inertia obstacle described above. In such instances, *leadership and role modeling* is likely a major part of the solution. As mentioned above, leadership is important to support both agility from a strategic perspective, as well as to lead and model a workforce that is willing and able to continuously learn and change. Furthermore, leaders can help to foster agile behavior by enhancing readiness for change and developing a culture that is open to new experiences, change, and continual learning.

FINAL THOUGHTS

In this article, we have attempted to provide an evidence-based way for leaders to manage VUCA, with an explicit focus on the human dynamics of such an endeavor through three sets of interrelated actions: identifying your VUCA, defining obstacles to agility, and implementing agility-enhancing practices. Our data suggest a number of useful insights. Practically, it appears highly relevant to know what leaders rate as the most important disruptive trends. Knowing this and similar information about trends is useful for executives because it helps them know more about the future for which they and their organizations should be planning. Additionally, we provided readers with two tools (Table 1, The VUCA Audit; and Table 2, A Leader’s Checklist for Enhancing Agility) for asking questions to get a sense for the VUCA present within and outside their organizations and for promoting agility within their own teams or organizations, respectively.

We then provided our findings regarding obstacles to agility and recommended practices. Due to the open-ended nature of our questions, our approach allowed participants to develop their own responses to the questions in accordance with their worldview. Communication was a common theme throughout our data, suggesting that it is both an advantage for promoting agility but also disadvantage if not done well. Knowledge sharing also appears to be advantageous, but organizational structures and rigid processes can prevent it from happening efficiently and effectively. We see our findings as a benchmark of sorts, but also as a guide. Given our large, diverse sample of leaders, we see considerable value in using our findings as suggested practices that

organizations might implement—and obstacles to avoid—to become increasingly agile.

Overall, our data and the interpretation provided here provides a unique window into the mindsets held by leaders regarding the forces of change they face and

how they cope with them. As such, we hope to provide both useful insights for current leaders and those who advise or study them, highlighting specific areas of concern and managerial strategies regarding the human dynamics of managing VUCA.



SELECTED BIBLIOGRAPHY

For a more detailed understanding of the concept of adaptive performance, which relates to the idea of agility at the level of the individual person, see: Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85(4), 612–624. Carol Dweck's work on growth mindsets may also be of interest; see Dweck, C. (2016). What having a “growth mindset” actually means. *Harvard Business Review*, 13, 213–226.

The Scrum Guide is helpful with regard to some of the agile behaviors that can assist with conducting project management or other types of team interactions in a more iterative, adaptive manner. See: <https://www.scrum.org/resources/scrum-guide>. The Society for Industrial and Organizational Psychology publishes an annual list of top workplace trends (see <https://www.siop.org/Business-Resources/Top-10-Workplace-Trends>), which executives may find useful for staying aware of ongoing changes regarding the human components of work.

Much of agility, as described in this article, involves high-quality communication, sensemaking, and decision-making. For communication, workplace meetings are critical; see Steven Rogelberg's evidence-based book on the topic: Rogelberg, S. G. (2019). *The surprising science of meetings: How you can lead your team to peak performance*. Oxford University Press. To learn more about the sensemaking framework briefly that we briefly described, see: Snowden, D. J., & Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review*, 85(11), 69–76. Karl Weick's and Kathleen Sutcliffe's work on high-reliability organizing is highly useful in terms of norms and behaviors necessary for mitigating turbulence. See: Weick, K. E., &

Sutcliffe, K. M. (2011). *Managing the unexpected: Resilient performance in an age of uncertainty*. John Wiley & Sons.

Many case studies highlight organizations and leaders that have successfully implemented agile policies and practices. The Institute for Corporate Productivity (i4cp) provides a number of case studies (visit <https://go.i4cp.com/threewaysofagility>). For a case study specifically about Ericsson, see: Paasivaara, M., Behm, B., Lassenius, C., & Hallikainen, M. (2018). Large-scale agile transformation at Ericsson: A case study. *Empirical Software Engineering*, 23(5), 2550–2596. More detailed information about the guilds that Spotify uses, see: Smite, D., Moe, N. B., Levinta, G., & Floryan, M. (2019). Spotify guilds: How to succeed with knowledge sharing in large-scale agile organizations. *IEEE Software*, 36(2), 51–57. A number of outlets, such as McKinsey & Co (e.g., <https://www.mckinsey.com/business-functions/organization/our-insights/the-journey-to-an-agile-organization>) and *Harvard Business Review* (e.g., “Embracing Agile,” 2016 and “The Performance Management Revolution,” 2016) have published guides on organizational agility and agile behaviors that often contain evidence and best-practices from companies.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

Benjamin E. Baran: Conceptualization, Methodology, Investigation, Writing - original draft, Writing - review & editing, Project administration. **Haley M. Woznyj:** Software, Formal analysis, Data curation, Writing - original draft, Writing - review & editing.

Benjamin E. Baran is an associate professor of management in the Monte Ahuja College of Business at Cleveland State University, co-founder and principal of the management consulting firm Indigo Anchor, co-host of The Indigo Podcast, and a captain in the U.S. Navy Reserve. His research on employee well-being, leadership, organizational change, and high-reliability organizing has appeared in a number of scholarly journals, including *Human Relations*, the *Journal of Business and Psychology*, and the *Journal of Vocational Behavior*, among others. He consults on matters of leadership, teamwork, agility, and human resource management across a wide range of sectors and industries. He earned his Ph.D. in organizational science from The University of North Carolina at Charlotte. (Cleveland State University, Monte Ahuja College of Business, 2121 Euclid Avenue, BU 435, Cleveland, OH 44115-2214, United States. Tel.: 216-687-4736; fax: 216-687-4708; email: b.e.baran@csuohio.edu (Corresponding author)).

Haley M. Woznyj is an assistant professor of management in the College of Business and Economics at Longwood University. Her research focuses on managing human resources to achieve strategic goals, how organizations can support employees, and specialized methods to gather data. Her work has been published in scholarly journals such as the *Journal of Management*, *Personnel Psychology*, and the *Journal of Business and Psychology*. She holds a master's degree in industrial/organizational psychology and a Ph.D. in organizational science, both from The University of North Carolina at Charlotte. (Longwood University, College of Business and Economics, 201 High Street, Hiner 104.2, Farmville, VA 23909, United States. Tel.: 434-395-2216; fax: 434-395-2203; email: woznyjhj@longwood.edu).